

ABSTRACT OF THE DISCLOSURE

A power converter is capable of outputting a large current while reducing harmonics flowing into an AC power supply and an AC load. The power converter includes a plurality of power units, each of which includes an input transformer having at least one primary winding connected with a polyphase AC power supply and at least one secondary winding, a polyphase self-excited rectifier circuit connected with the secondary winding, and a single-phase self-excited inverter circuit connected with the polyphase self-excited rectifier circuit through a DC link circuit to generate a single-phase output. One of single-phase outputs of each power unit is connected with one of single-phase outputs of another power unit so that the outputs of the plurality of power units are cascaded in series with one another, with the serially connected outputs of the power units being connected with a polyphase AC load.